

Application No.: 10/713,753

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Docket No.: 188122002000
Client Reference No.: CAD: 03-094**REMARKS**

Claims 1-33 are pending to the present application. By virtue of this response, no claims have been cancelled, amended or added. Accordingly, claims 1-33 are currently under consideration. Amendment and cancellation of certain claims is not to be construed as dedication to the public of any of the subject matter previously presented.

The Examiner is thanked for taking the initiative to contact Applicants' representative Thomas Chan on 11/06/2006 and 11/10/2006. On the phone interviews, only issues pertaining to claim rejections based on 35 U.S.C. 101 was discussed. The Examiner proposed an amendment to claims 1, 12, and 23 to put the claims in condition for allowance. However, no agreement was reached.

Claim Rejection under 35 U.S.C. § 101

Claims 1-33 stand rejected Under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully traverse this rejection

"Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101." (MPEP §2106(II)(A), emphasis added) Under this test, "[a] claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful." (MPEP §2106(IV)(B)(2)(b), part ii). For example: "transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' – a final share price" (MPEP §2106(II)(A); citing *State Street*, 149 F.3d at 1373).

The Office alleges that the claims do not produce a useful, tangible, concrete result. Applicants respectfully disagree. As one of ordinary skill in the art would recognize, the result of "simulating the one or more group circuits ... in accordance with a rate of change of signal conditions of each individual group circuit" as recited in Claims 1-33 generates predicted behavior of the circuit. Referring to Figure 1A of the present application, the simulation results (i.e., the predicted behavior) may be displayed, for example, "in the form of waveforms, measurement, or checks 110 on a computer

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screen for engineers to inspect” These simulation results may be used to detect and correct design errors and to optimize design parameters, for example. Thus, similarly to the process in *State Street*, “simulating ... group circuits” which are capable of producing “a predictable set of output signals with a given set of input signals” as recited in Claims 1-33 is a practical application in the technological arts because it transforms data (e.g., a netlist description of the circuit) into a useful, concrete, and tangible result - simulation results such as, for example, waveforms or measurements. In particular, these simulation results are useful, concrete, and tangible in the same sense as was the final share price (a calculated number) cited in *State Street*.

In addition, claims 1-33 also describes concrete, tangible, and useful data structures, such as “a circuit having a hierarchical data structure” and “a scheduled event queue”. In *In re Warner*, 33 F.3d 1354, the Federal Circuit held that “Applicant’s data structures are physical entities that provide increased efficiency in computer operation.” More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory.” In *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, the Federal Circuit held that “whether stated implicitly or explicitly, we consider the scope of §101 to be the same regardless of the form, machine or process – in which a particular claim is drafted.” Applicants submit that the hierarchical data structure of the present invention provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed and stored. The hierarchical data structure also facilitates more efficient communication of signals during transient simulation of the one or more group circuits.

Hence, Applicants respectfully request that the Office withdraw the rejection under 35 U.S.C. 101.

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In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 188122002000. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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